

The Impacts of Single-Use Plastic Bags



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MBNMS Sanctuary Advisory Council

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Single-Use Plastic Bags

- Over 19 billion single-use high density polyethylene (HDPE) plastic grocery bags are used annually in California.
- Most end up in landfills or as litter.
- Of the four types of bags considered, plastic bags have the greatest impact on litter.



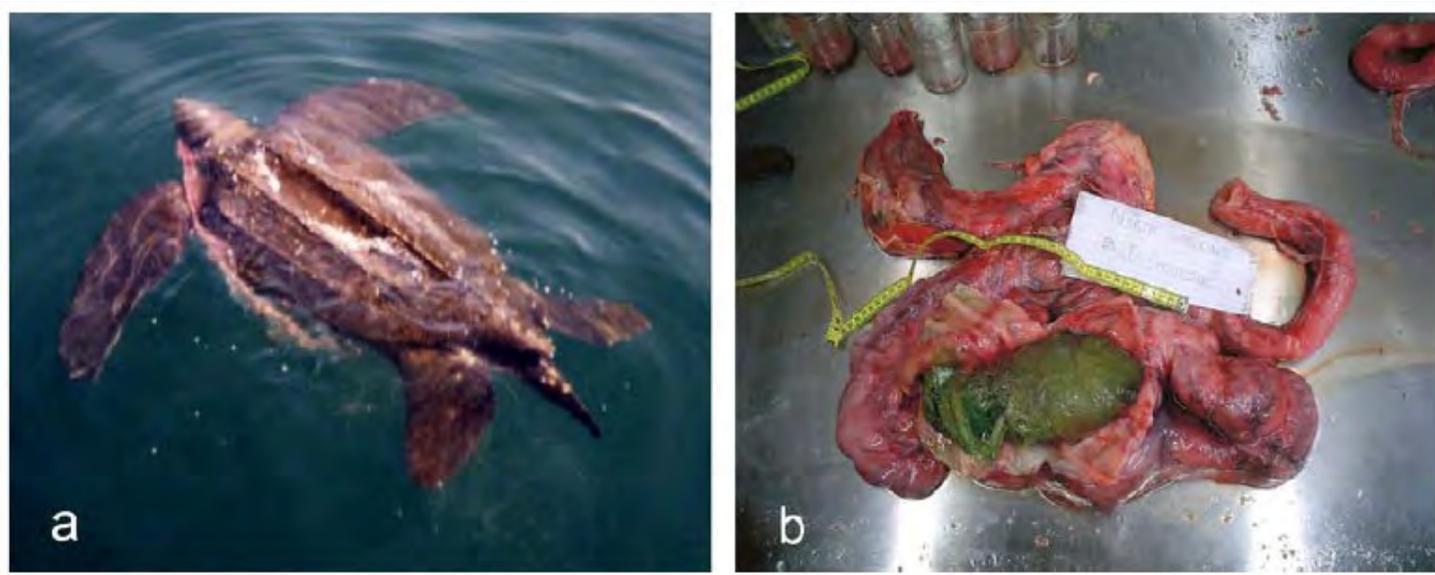
Effects on Marine Life

- Over 267 species of marine wildlife have been affected by plastic bag litter
- Clogging the throat, thus choking the animal
- Artificially filling the stomach so that the animal cannot consume food, depriving them of nutrients
- Infecting them with harmful toxins that can poison the animal
- Entangling the animal, leading to choking, cuts, and restricting growth



Leatherback Sea Turtles

- 37% of 371 autopsied leatherback turtles since 1968 had plastic in their GI tract



International Coastal Cleanup

- 108 countries
- ~500,000 volunteers
- 7.4 million pounds of debris
- 10.2 million pieces of trash
- Top 3 items:
 1. Cigarettes/filters
 2. Plastic bags
 3. Food wrappers.



California Coastal Cleanup

California Statewide	
Cigarettes/Filters	394,920
Food Wrappers/ Containers	143,556
Caps, Lids	99,243
Bags (plastic)	71,336
Cups, plates, forks, knives, spoons	43,837

Monterey Bay Cleanups

Plastic Bags:

2007: 1799

2008: 5674

2009: 3087

ACC 2009: 4057

2010: 4102

ACC 2010 SC: 4423

ACC 2010 Mont: 2494

2011: 365

Total: 26,001

International Coastal Cleanup 2009

MARINE WILDLIFE FOUND ENTANGLED IN MARINE DEBRIS

WILDLIFE	BEVERAGE BOTTLES	BEVERAGE CANS	CRAB, LOBSTER, & FISH TRAPS	FISHING HOOKS	FISHING LINE	FISHING NETS	PLASTIC BAGS	RIBBON/STRINGS	ROPE	6-PACK HOLDERS	WIRES	TOTAL
AMPHIBIANS	1	0	0	0	3	1	6	0	0	1	0	12
BIRDS	2	0	0	5	45	53	19	5	5	1	3	138
FISH	5	1	2	1	48	11	11	2	5	1	2	89
INVERTEBRATES	6	2	1	1	14	12	6	7	6	0	0	55
MAMMALS	0	0	0	3	6	1	6	1	5	1	0	23
REPTILES	0	0	0	0	10	4	1	1	2	0	1	19
TOTAL DEBRIS ITEMS	14	3	3	10	126	82	49	16	23	4	6	336



Debris Collection Results, Monterey CA, Summer, 2009

Percent of Total By Category (Top Five)

- plastic 55%
- styrofoam 14%
- biodeg 12%
- metal 3%
- other 16%

— Avg Sail Track



Debris data collected by SeaLife Conservation, Total piece count 254. May - September, 2009. Copyright 2009 - SeaLife Conservation



Not just a problem for marine life

- Trashed neighborhoods invite crime
- Litter has a detrimental effect on tourism
- Everyone deserves a clean neighborhood
- Economics
 - Cost of cleanup: cities and agricultural land
 - Stores pass on the cost of “free” bags to consumers



Recycling is **NOT** the Solution

- 1) It is **cost prohibitive** to recycle plastic bags or other types of plastic film or plastic wrap in curbside programs.
 - 2) The recycled bags **have little value**, and when collected get badly contaminated, decreasing their value further.
 - 3) There are virtually **no markets** in the U.S. for curbside-recovered plastic bags, and international markets are not much better.
 - 4) Curbside plastic bags get **wound up in collection and processing equipment**, requiring maintenance that costs money and time, and **creates inefficiencies** for processing all the recyclables
- From Ken Prue, San Diego Recycling Program

Progress on Bans so far in California

- **City of San Francisco**-March 2007
- **City of Oakland**-July 2007 (suspended by suit)
- **City of Fairfax**-August 2007
- **City of Malibu**-May 2008
- **City of Los Angeles**-July 2008
- **City of Manhattan Beach**-July 2008 (suspended by suit)
- **City of Palo Alto**-March 2009
- **County of Los Angeles**-November 2010
- **City of San Jose**- December 2009
- **City of Long Beach**-December 2010
- **County of Marin**- January 2011
- **City of Santa Monica**- January 2011
- **City of Santa Barbara**- January 2011

- **Cities of Santa Cruz, Capitola, Glendale, Arcata, Sunnyvale, St. Helena, and the Counties of Santa Cruz, Marin & Alameda** are all moving towards plastic bag bans.

- **AB 1998 (statewide ban) did not pass California legislature in 2010**

- **California Supreme Court will determine whether full EIRs are required**

Proposed SAC Resolution

- Formally recognizes the problem
- Supports legislation and local ordinances
- Supports voluntary initiative by businesses
- Supports clean-up efforts
- MBNMS SAC would be the first!

Thank you!

